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10/598,784	09/11/2006	Mitsunori Morisaki	U2054.0159	1349

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EXAMINER	
WANG-HURST, KATHY W	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
12/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,784	MORISAKI, MITSUNORI	
	Examiner	Art Unit	
	KATHY WANG-HURST	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,22-24 and 38-79* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1 and 23-52* is/are allowed.

6)☒ Claim(s) *22, 53-79* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment filed on 10/16/2008 has been entered. Claims 1, 22-24 and 38-79 are still pending in this application.

Response to Arguments

2. Applicant's arguments filed have been fully considered but they are not persuasive.

The applicants argued features wherein a position measuring system measuring the a wireless station position using various techniques such as two-way TOA and TDOA, home base stations and distributed antenna provisioning, and increasing the number of measurements in order to improve accuracy based on the characteristics of the wireless station, read upon Karr as follows.

Karr discusses a location system using a plurality of mobile station locating technologies including those based on two-way TOA and TDOA, home based stations and distributed antenna provisioning. Thus Karr shows the limitation of "a positioning system for measuring a communication situation between a wireless station that is an object of positioning and each of a plurality of wireless stations other than said wireless station that is an object of positioning, thereby to specify a position of said wireless station that is an object of positioning". Karr discusses increasing the number of measurements in order to improve accuracy of the measurement based on characteristic of wireless station such as receiver's internal noise level, signal fading due to multipath, moving

state of the receiver, the wireless station's ability to detect number or CDMA fingers and pilots. Thus Karr shows the limitation of "characterized in including a means for deciding a measurement number of times of the communication situation based upon a characteristic of said wireless station that is an object of positioning, or a characteristic of said plurality of said wireless stations, or a characteristic of a combination of said wireless station that is an object of positioning and said plurality of said wireless stations".

Therefore, the argued limitations read upon the cited references or are written broad such that they read upon the cited references, as follows.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 22, 53-79 are rejected under 35 U.S.C. 102(e) as being anticipated by Karr et al. (US 6952181) herein after referred as Karr.

Regarding claim 22, Karr discloses a positioning system for measuring a communication situation between a wireless station that is an object of positioning and each of a plurality of wireless stations other than said wireless station that is an object of positioning (see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), thereby to specify a position of said wireless station that is an object of positioning(see Abstract, col. 33 lines

10-30), characterized in including a means for deciding a measurement number of times of the communication situation based upon a characteristic of said wireless station that is an object of positioning (col. 36 lines 28-47, increasing measurement quantity to improve accuracy; col. 5 lines 30-60, receiver's internal noise level and signal fading, col. 3 lines 55-58, moving in urban area; col. 38 lines 50-60, receiver searching all relevant pilots and fingers), or a characteristic of said plurality of said wireless stations, or a characteristic of a combination of said wireless station that is an object of positioning and said plurality of said wireless stations (col. 61 lines 21-41data from the Table SP-5 are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements).

Regarding claim 53, Karr discloses a method of deciding a measurement number of times in a positioning system for measuring a communication situation between a wireless station that is an object of positioning and each of a plurality of wireless stations other than said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), thereby to specify a position of said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), characterized in including a step of deciding the measurement number of times of the communication situation based upon a characteristic of said wireless station that is an object of positioning(col. 36 lines 28-47, increasing measurement quantity to improve accuracy; col. 5 lines 30-60, receiver's internal noise level and signal fading, col. 3 lines 55-58, moving in urban area; col. 38 lines 50-60, receiver searching all relevant pilots

and fingers), or a characteristic of said plurality of said wireless stations, or a characteristic of a combination of said wireless station that is an object of positioning and said plurality of said wireless stations (col. 61, Table SP-5, database having identification information of wireless stations; and col. 61 lines 21-41data from the table are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements).

Regarding claim 54, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in including the steps of:
pre-storing identification information of said wireless station that is an object of positioning, or identification information of said plurality of said wireless stations, and necessary measurement number-of-times conclusion information for drawing a conclusion on the measurement number of times correspondingly to each other, said necessary measurement number- of-times conclusion information derived from the characteristic of said wireless station that is an object of positioning, or the characteristic of said plurality of said wireless stations, or the characteristic of a combination of said wireless station that is an object of positioning and said plurality of said wireless stations (col. 61, Table SP-5, database having identification information of wireless stations; and col. 61 lines 21-41data from the table are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements, therefore identification information of wireless station leads to the number of measurements); and

retrieving necessary measurement number-of-times conclusion information corresponding to the received identification information of the wireless station that is an object of positioning, or to the received identification information of the plurality of the wireless stations to decide the measurement number of times based upon this necessary measurement number-of-times conclusion information (col. 61 lines 21-41data from the Table SP-5 are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements).

Regarding claim 55, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in including the steps of:
pre-storing identification information of the wireless station and the necessary measurement number-of-times conclusion information via group information, being information associated with a group of which the characteristic resembles that of the wireless station, correspondingly to each other; and
retrieving necessary measurement number-of-times conclusion information corresponding to the received identification information of the wireless station that is an object of positioning, or to the received identification information of the plurality of the wireless stations via the group information to decide the measurement number of times based upon this necessary measurement number-of-times conclusion information (col. 61 lines 21-41data from the Table SP-5 are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements, therefore identification information of wireless station leads to the number of

measurements).

Regarding claim 56, Karr discloses the method of deciding the measurement number of times according to claim 55, characterized in that said group information is at least one of a model number of the wireless station, a model number of an IC for wireless communication mounted onto the wireless station, manufacturer information of an IC for wireless communication mounted onto the wireless station, and wireless communication technique information to which the IC for wireless communication mounted onto the wireless station corresponds (col. 61, Table SP-5, database having identification information of wireless stations).

Regarding claim 57, Karr discloses the method of deciding the measurement number of times according to claim 55, characterized in including a step of acquiring MIB information, thereby to acquire said group information (col. 61, Table SP-5).

Regarding claim 58, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said necessary measurement number-of times conclusion information is a measurement number of times (col. 61 lines 21-41data from the Table SP-5 are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements, therefore identification information of wireless station leads to the number of

measurements).

Regarding claim 59, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said necessary measurement number-of-times conclusion information is a standard deviation of a dispersion in an internal process delay in the wireless station that is an object of positioning or the other wireless station (col. 60 line 47-48 delay spread; col. 79 line 30 standard deviations).

Regarding claim 60, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in including a step of updating the necessary measurement number-of-times conclusion information based upon an acquired measurement result (col. 6 line 42-col. 7 line25, updating table).

Regarding claim 61, Karr discloses the method of deciding the measurement number of times according to claim 60, characterized in including a step of performing an operational process weighted with a total measurement number of times for the necessary measurement number-of-times conclusion information and the measurement result, thereby to update the necessary measurement number-of-times conclusion information (col. 6 line 42-col. 7 line25, updating table).

Regarding claim 62, Karr discloses the method of deciding the measurement number of times according to claim 61, characterized in including a step of performing an

operational process weighted with a total measurement number of times for the necessary measurement number-of-times conclusion information, the acquired measurement result, and a past measurement result, thereby to update the necessary measurement number-of-times conclusion information (col. 6 line 42-col. 7 line25, updating table).

Regarding claim 63, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said measurement of said communication situation is a measurement of a radio wave propagation time (Abstract and col. 61 line 37).

Regarding claim 64, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said plurality of said wireless stations perform said measurement of said communication situation (col. 61 lines 21-41data from the Table SP-5 are used to determine number of CDMA fingers and pilots detectable which are used to filter the incoming RF signal measurements).

Regarding claim 65, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said wireless station that is an object of positioning performs said measurement of said communication situation (Abstract).

Regarding claim 66, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said wireless station performing said measurement of said communication situation is a wireless base station (col. 11 lines 28-39).

Regarding claim 67, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said wireless station performing said measurement of said communication situation is a wireless terminal station (col. 11 lines 28-39).

Regarding claim 68, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said decision of the measurement number of times of said communication situation is performed by a positioning server having a connection with each of said plurality of said wireless stations via a network (col. 11 lines 28-39).

Regarding claim 69, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said decision of the measurement number of times of said communication situation is performed by said plurality of said wireless stations(col. 11 lines 28-39).

Regarding claim 70, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said decision of the measurement number of times of said communication situation is performed by said wireless station that is an object of positioning (col. 11 lines 28-39).

Regarding claim 71, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said necessary measurement number-of-times conclusion information is information prepared by taking into consideration the characteristic of the wireless station that is an object of positioning, or the characteristic of the wireless station other than the wireless station that is an object of positioning, or the characteristic of a combination of said wireless station that is an object of positioning and the wireless station other than said wireless station that is an object of positioning, and a positioning quality that is requested (col. 45 line25-26).

Regarding claim 72, Karr discloses the method of deciding the measurement number of times according to claim 71, characterized in that said quality of said positioning is positioning precision information (col. 39 line57-58).

Regarding claim 73, Karr discloses the method of deciding the measurement number of times according to claim 71, characterized in that said quality of said positioning is use application information (col. 82 line 27).

Regarding claim 74, Karr discloses the method of deciding the measurement number of times according to claim 53, characterized in that said identification information of said wireless station is at least one of a person name using the wireless station, a personal ID of a person using the wireless station, an appliance name registered to a wireless station appliance, an MAC address of the wireless station, an IP address of the wireless station, and an arbitrary ID allocated to the wireless station(col. 61, Table SP-5, first column mobile station identification).

Regarding claim 75, Karr discloses a positioning system for measuring a communication situation between a wireless station that is an object of positioning and each of a plurality of wireless stations other than said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), thereby to specify a position of said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), characterized in including a means for, based upon a set measurement number of times and a measurement result based upon said set measurement number of times(col. 36 lines 58-67), obtaining a new measurement number of times to performing the positioning again by this measurement number of times(col. 36 lines 28-47, increasing measurement quantity to improve accuracy).

Regarding claim 76, Karr discloses a method of deciding a measurement number of times in a positioning system for measuring a communication situation between a wireless station that is an object of positioning and each of a plurality of wireless

stations other than said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), thereby to specify a position of said wireless station that is an object of positioning(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), characterized in including a step of, based upon a set measurement number of times and a measurement result based upon said set measurement number of times, deciding a new measurement number of times (col. 36 lines 28-47, increasing measurement quantity to improve accuracy).

Regarding claim 77, Karr discloses a positioning server, characterized in:
based upon a measurement result of a communication situation between each of a plurality of wireless stations having a connection therewith and a wireless station that is a subordinate of said plurality of said wireless stations, specifying a position of said wireless station that is an subordinate (see Abstract, col. 33 lines 10-30, col. 34 lines 35-51; col. 11 lines 28-39 telephony infrastructure, which is further defined in col. 10 lines 36-39); and
deciding a measurement number of times of the communication situation based upon a characteristic of said wireless station that is an subordinate, or a characteristic of said plurality of said wireless stations, or a characteristic of a combination of said wireless station that is an subordinate and said plurality of said wireless stations(col. 36 lines 28-47, increasing measurement quantity to improve accuracy; col. 5 lines 30-60, receiver's internal noise level and signal fading, col. 3 lines 55-58, moving in urban area; col. 38 lines 50-60, receiver searching all relevant pilots and fingers).

Regarding claim 78, Karr discloses a wireless station, characterized in:
receiving a positioning request including information associated with a characteristic of a wireless station that is a subordinate from a server having a connection therewith to measure a distance with said wireless station that is a subordinate, and to send this measured distance to said server in which a position of a terminal, being a subordinate, is specified (col. 30 lines 30-67); and
deciding a measurement number of times of said distance based upon said characteristic of said wireless station that is a subordinate(col. 36 lines 28-67).

Regarding claim 79, Karr discloses a wireless station, characterized in:
receiving a positioning request from a server(see Abstract, col. 33 lines 10-45, col. 34 lines 35-51), said positioning request from said server including a characteristic of its own wireless station and a requested positioning quality(col. 5 lines 30-60, receiver's internal noise level and signal fading, col. 3 lines 55-58, moving in urban area; col. 38 lines 50-60, receiver searching all relevant pilots and fingers), to measure distances with a plurality of the wireless stations each of which is a connection destination(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), to send said measured distances to said server having a connection with said plurality of said wireless stations(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51), in which a position of its own wireless station is specified(see Abstract, col. 33 lines 10-30, col. 34 lines 35-51); and
deciding a measurement number of times of said distance based upon said characteristic of its own wireless station and said requested positioning quality (col. 36

lines 28-47, increasing measurement quantity to improve accuracy; col. 5 lines 30-60, receiver's internal noise level and signal fading, signal level has to be higher than receiver's internal noise level).

Allowable Subject Matter

5. Claims 1, 23-24, 38-52 are allowable.

Conclusion

6. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHY WANG-HURST whose telephone number is (571) 270-5371. The examiner can normally be reached on Monday-Thursday, 7:30am-5pm, alternate Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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